

ABSTRACT

A method of detecting and correcting bit errors in a digitally encoded data stream includes correlating a received bit transition in the data stream with a multitude of possible bit transitions to generate corresponding correlated bit transition values. A bit transition decision corresponding to a greatest correlated bit transition value is then generated for the received bit transition. Consecutive bit transition decisions generated for the data stream are compared to identify bit transition decision errors. Respective bit transition decisions are examined to determine if each decision is consistent with a prior adjacent bit transition decision in the data stream. If a bit transition decision error is identified, then the next greatest correlated bit transition decision is substituted for the bit transition decision in error.